

# MATERIAL SAFETY DATA SHEET

**L/R RAM 50-P**

Health Hazard ..... : 2-Moderate  
 Flammability Hazard ..... : 0-Minimal  
 Reactivity Hazard ..... : 0-Minimal  
 Personal Protection ..... : B-Glasses, gloves

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 Print Date ..... : March 22, 2001  
 Revised ..... : January 17, 2001  
 MSDS No ..... : LPLLR50P\_C01C

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name ..... : L/R RAM 50-P  
 General Use ..... : A chemically bonded, air-setting refractory plastic for placement by ramming.

### MANUFACTURER:

Pryor Giggey Co.  
 138 Sears Road  
 Chehalis, WA 98532

### TELEPHONE NUMBERS:

M-F, 8:00 a.m. - 5:00 p.m. PT  
 Phone ..... : (360) 748-9295  
 Fax ..... : (360) 748-1594  
 Contact Person .. : Tim Austel

## 2. COMPOSITION/HAZARDOUS INGREDIENTS

<u>Ingredient</u>	<u>CAS Registry #</u>	<u>Percent</u>	<u>Exposure Limits</u>
Alumina (Al <sub>2</sub> O <sub>3</sub> )	1344-28-1	5-20	OSHA PEL = 15mg/m <sup>3</sup> total, 5mg/m <sup>3</sup> resp. dust; ACGIH TLV = 10mg/m <sup>3</sup> total dust. See note 1.
Aluminosilicate	1302-93-8	55-70	OSHA PEL = 10mg/m <sup>3</sup> total dust; OSHA PEL = 5mg/m <sup>3</sup> respirable dust.
Aluminum Phosphate	13530-50-2	<3	None established
Cristobalite (SiO <sub>2</sub> )	14464-46-1	<7	OSHA PEL = 0.05mg/m <sup>3</sup> respirable dust; ACGIH TLV = 0.05mg/m <sup>3</sup> respirable dust.
Phosphoric Acid	7664-38-2	<1	OSHA PEL = 1mg/m <sup>3</sup> , STEL = 3mg/m <sup>3</sup> ; ACGIH TLV = 1mg/m <sup>3</sup> , STEL = 3mg/m <sup>3</sup> .
Quartz (SiO <sub>2</sub> )	14808-60-7	<10	OSHA PEL = 0.1mg/m <sup>3</sup> respirable dust; ACGIH TLV = 0.1mg/m <sup>3</sup> respirable dust.

Some of the above ingredients are integral mineralogical constituents contained within the matrix of the raw materials.

Note 1: ACGIH TLV for total dust with no asbestos and less than one percent crystalline silica.

## 3. HAZARDS IDENTIFICATION

Emergency Overview ..... : This is a white to gray mixture of granular materials in a moldable consistency. It has a slight pungent odor and poses no immediate health or environmental hazard.

### Potential Health Effects:

Primary Entry Route(s) ..... : Inhalation  
 Target Organs ..... : Respiratory System

### Acute Effects:

Eyes ..... : May cause irritation and/or burning sensation from phosphoric acid component.  
 Skin ..... : May cause irritation or burns to skin from repeated or prolonged contact.  
 Ingestion ..... : May cause burns to tissue or harmful internal effects.  
 Inhalation ..... : May cause upper respiratory irritation.

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**3. HAZARDS IDENTIFICATION (cont.)**

Chronic Effects .....: Dust generated from dry material may contain crystalline silica. IARC Monograph Volume 68, 1997 concludes that, "There is sufficient evidence in humans for the carcinogenicity of inhaled crystalline silica in the form of quartz or cristobalite from occupational sources." IARC classification - Group 1.  
NTP has included crystalline silica in its list of substances that are "reasonably anticipated to be carcinogens."

Signs and Symptoms .....: Cough, shortness of breath.

Medical Conditions  
Aggravated by Exposure .....: Pre-existing chronic lung conditions such as, but not limited to, bronchitis, emphysema, and asthma. Exposure to crystalline silica in conjunction with other carcinogens (such as cigarette smoking) may have a synergistic (compounding) effect.

**4. FIRST AID MEASURES**

Eyes .....: Flush eyes thoroughly with water for at least 15 minutes. Consult physician.  
Skin .....: Wash with a mild soap and water.  
Ingestion .....: Do not induce vomiting. Get prompt medical attention.  
Inhalation .....: Remove to fresh air. If not breathing, give artificial respiration. Get immediate medical attention.

**5. FIRE FIGHTING MEASURES**

Fire and Explosion Hazards ...: L/R RAM 50-P is non-combustible and will not contribute to the intensity of a fire.

Flash Point and Method .....: Not Applicable.  
Flammable Limits .....: Not Applicable.  
Autoignition Temperature ....: Not Applicable.  
Extinguishing Media .....: As appropriate for the surrounding fire.  
Fire Fighting Equipment .....: As appropriate for the surrounding fire.

**6. ACCIDENTAL RELEASE MEASURES**

Spill/Leak procedures .....: Reuse any spilled material where possible. Carefully scoop material into a suitable container. If conditions warrant, clean-up personnel should wear approved respiratory protection, gloves, and goggles to prevent irritation from contact and/or inhalation. Authorities must be notified if the spilled material contains more than the reportable quantity of phosphoric acid. See section 15.

**7. HANDLING AND STORAGE**

Handling .....: L/R RAM 50-P requires no special handling other than adherence to good industrial practices.

Storage .....: Keep covered to prevent dry-out.

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**8. EXPOSURE CONTROL/PERSONAL PROTECTION**

Ventilation .....: Provide adequate general ventilation and local ventilation to control mist and/or dust levels below the TLV.  
Personal Protective Equipment  
Eyes .....: Goggles  
Skin .....: Long sleeve clothing  
Inhalation .....: Dust mask  
Other .....: Gloves

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Boiling Point .....: Not Applicable.  
Vapor Pressure .....: Not Applicable.  
Vapor Density .....: Not Applicable.  
Solubility in Water .....: 2-4 (%)  
Specific Gravity (H<sub>2</sub>O=1) .....: 2.6  
Melting Point .....: >3100°F  
pH .....: 2.5 - 3.5 (10% Aqueous Slurry)

**10. STABILITY AND REACTIVITY**

Chemical Stability .....: L/R RAM 50-P is stable under normal ambient and anticipated conditions of temperature and pressure.  
Incompatible Materials and  
Conditions to Avoid .....: None.  
Hazardous Polymerization ...: Will not occur.  
Hazardous Decomposition ...: Will not occur.

**11. TOXICOLOGICAL INFORMATION**

There are no known health effects that can arise from the as-manufactured L/R RAM 50-P. There is no evidence to suggest that L/R RAM 50-P itself is carcinogenic.

**12. ECOLOGICAL INFORMATION**

L/R RAM 50-P is believed to pose no threat to the environment if released on land or into water. However, it contains a minor percentage of phosphoric acid that must be reported if released in quantities equal to or greater than the reportable quantity. See section 15.

**13. DISPOSAL CONSIDERATIONS**

L/R RAM 50-P as-manufactured is not considered a hazardous waste. However, before destruction of the refractory lining, customers are advised to evaluate any changes to the product that may occur by the introduction of substances or operating conditions outside the control of the vendor.

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**14. TRANSPORT INFORMATION**

L/R RAM 50-P is not a DOT Hazardous Material and it contains less than the reportable quantity of phosphoric acid. See section 15.

**15. REGULATORY INFORMATION**

Section 2 lists OSHA exposure limits for chemicals considered by OSHA to be air contaminants.

Phosphoric acid is listed on the CWA Section 311 Hazardous Chemicals list. RQ = 5000 lb.

Phosphoric acid is listed on the CERCLA Hazardous Substances list. RQ = 5000 lb.

Phosphoric acid is listed on the SARA Title III Section 313 Toxic Release Chemicals list. TPQ = 1% concentration.

Phosphoric acid is listed on the DOT Hazardous Materials list. RQ = 5000 lb.

**16. OTHER INFORMATION**

Although reasonable care has been taken in the preparation of the information contained herein, Pryor Giggey Co. extends no warranties, makes no representations and assumes no responsibility as to the accuracy or suitability of such information for application to purchaser's intended purposes or for consequences of its use.

**WARNING:** This product may contain respirable crystalline silica; a chemical known to the State of California to cause cancer.